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1.1 Statement

1. Introduction

We live up to the promise of Thermaltake logo in our unending quest for excellence. Shall you have any suggestion or comments, please access our website:
Http://www.thermaltake.com

We appreciate your kindly feedback and you will receive the prompt response from our customer service team.
Please take the time in familiarizing yourself with the power supply, its connectors and the contents of this manual before proceeding with the installation of the power unit. You will need a Philips crosshead screwdriver, perhaps your PC case manual and most certainly your motherboard manual.

Should you have any questions regarding the content of the manual, please contact Thermaltake directly. Failure to follow the proper procedures may cause severe bodily harm or PC component damage.

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297X 210 mm

1.2 Warnings and Cautions

1.2.1 Do not pull the AC power cord when the power supply is in use or the damages to the components will occur.

1.2.2 Do not store the Power Supply in high humidity and high temperature environment.

1.2.3 When using Toughpower Cable Management 1000W power supply under testing conditions where the power supply unit is not installed in a PC with its components, please follow the steps below:

1) Please take a paper clip and untwist it.
2) Make sure the power supply unit is in the "OFF" position.
3) Locate the 20+4 pin motherboard connector from the power supply unit.
4) Plug one side of the paper clip into the green wire hole.
5) Plug the other side of the paper clip into any of the black wire holes.
6) Turn on the PSU to see if the power supply fan(s) turn(s) on.

1.2.4 High voltages exist in the power supply. Do not open the power supply case unless you are an authorized service technician or electrician.

1.2.5 All warrantees and guarantees shall be voided should there be a failure to comply with any of the warnings and cautions covered in this manual.

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2. Product Features

2.1 NEW！！8 pin PCI-E Connector

Toughpower 1000w power supplies come with three of the latest 8-pin PCI-E connectors required for the next generation NVIDIA and ATI graphics cards. These new defined 8-pin connectors are downward compatible with the existing 6-pin PCI-E connectors with an 8 pin to 6 pin converter. Thus, with the included three 6-pin/8-pin connectors, Toughpower 1000W support up to three high-end graphic cards.

2.2 Excellent Efficiency (up to 87%)

Toughpower 1000W provide excellent efficiency and hence reducing energy consumption. That in return reduces customers' electricity bill.

2.3 140mm Ball-Bearing Fan

The 140mm ball bearing fan effectively increases the airflow inside the PSU and decreases the ambient temperature.

2.4 Extremely good voltage regulation (±3%)

This feature allows tighter load regulation (±3%) than other power supplies (±5%) and increase system voltage stability.

2.5 MTBF > 120,000 hours (Highly reliable)

120,000 hours of MTBF (Mean Time between Failures) goes above and beyond all ATX specifications.

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2.6 Four Independent +12V rails

Four independent +12V rails are provided to support the high-end graphic card and PC system.

2.7 Cable Management

Cable Management enables users to remove unused cables and significantly improves the airflow in the chassis.

2.8 Industrial grade components (capacitor, transformer, etc)

All components are specially designed for industrial environment and extreme conditions.

2.9 Hi-Tech Black Coating

With special Hi-Tech Black coating, Toughpower 1000W PSUs looks professional, elegant and unique.

2.10 High +5VSB Output

Built-in higher +5VSB (from 2A to 3.5A(PS-ON status)) supports up to 12 USB devices. Also, even the system is power off, USB devices can still be charged by the 3A sustained output.

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3. Components Check

1. One Toughpower 1000W power supply unit(w/ one 20+4pin main power connector, one 4+4pin +12V power connector, and one 8pin power connector)

2. Three sets of wire w/ 8pin PCI-E connector

3. Three sets of wire w/ 6pin PCI-E connector

4. Two sets of wires w/ 5pin SATA connector

5. Two sets of wire w/ 4pin peripheral connector

6. One AC Input power cord

7. 4 mounting screws

8. User manual

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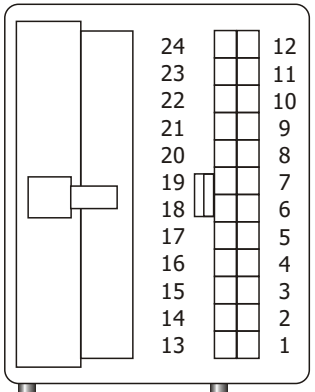
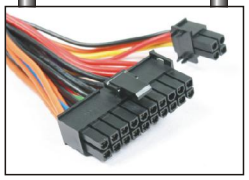
4. Connectors & Modularized Cable Management

4.1 Connectors

4.1.1Main Power Connector (20+4 pin)

Support the latest ATX 12V 2.2 system motherboard





Voltage	Color			Color	Voltage
+3.3V	Orange	1	13	Orange	+3.3 V
+3.3V	Orange	2	14	Blue	-12 V
COM	Black	3	15	Black	COM
+5V	Red	4	16	Green	PS_ON#
COM	Black	5	17	Black	COM
+5V	Red	6	18	Black	COM
COM	Black	7	19	Black	COM
PWR_ON	Gray	8	20	N/C	N/C
+5Vsb	Purple	9	21	Red	+5 V
+12VDC	Yellow	10	22	Red	+5 V
+12VDC	Yellow	11	23	Red	+5 V
+3.3 V	Orange	12	24	Black	COM

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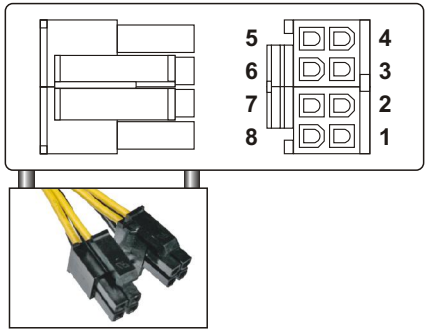
4.1.2 CPU Connector (4+4 pin)

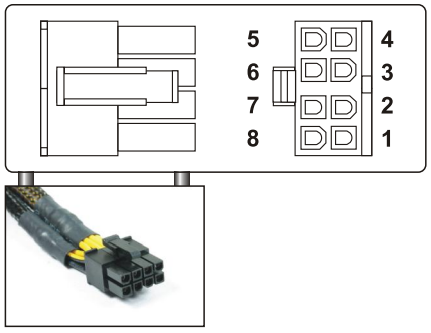
Support both dual CPU and single CPU systems by simply combining (8 pin) or splitting (4 pin X 2) the connectors



Color	Signal	Pin
Black	GND	1
Black	GND	2
Black	GND	3
Black	GND	4
Yellow	+12VDC	5
Yellow	+12VDC	6
Yellow	+12VDC	7
Yellow	+12VDC	8

4.1.3 CPU Connector (8 pin)

Support the latest 8 pin Quad Core system motherboard



Color	Signal	Pin
Black	COM	1
Black	COM	2
Black	COM	3
Black	COM	4
Yellow	+12VDC	5
Yellow	+12VDC	6
Yellow	+12VDC	7
Yellow	+12VDC	8

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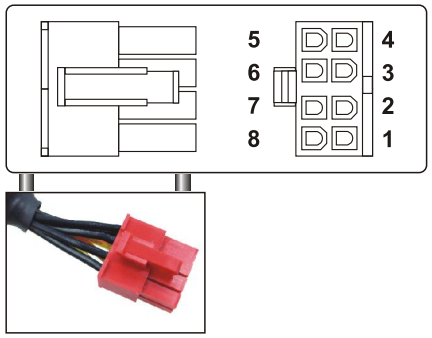
4.1.4 PCI-E Connector (8 pin)*

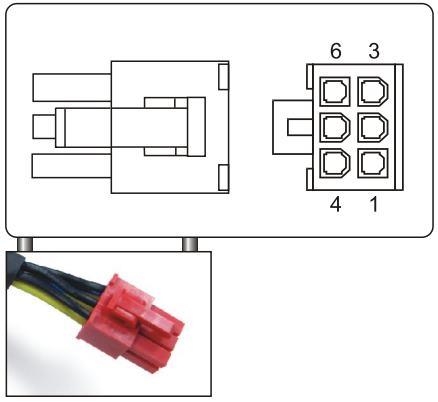
Support next generation 8 pin sockets on high-end graphic cards and can support the existing 6 pin sockets by connecting to the 8 pin to 6 pin converter.



Color	Signal	Pin
Yellow	+12VDC	1
Yellow	+12VDC	2
Yellow	+12VDC	3
Black	GND	4
Black	GND	5
Black	GND	6
Black	GND	7
Black	GND	8

4.1.5 PCI-E Connector (6 pin)*

Support the latest high-end graphic cards with 6 pin socket



Color	Signal	Pin
Yellow	12VDC	1
Yellow	12VDC	2
Yellow	12VDC	3
Black	COM	4
Black	COM	5
Black	COM	6

A 6 pin & a 8 pin PCI-E connectors can be connected to the same graphic card if there are two 6 pin sockets or both 8 pin socket and 6 pin sockets available on the card. Please refer to Section 6.2 for more information.

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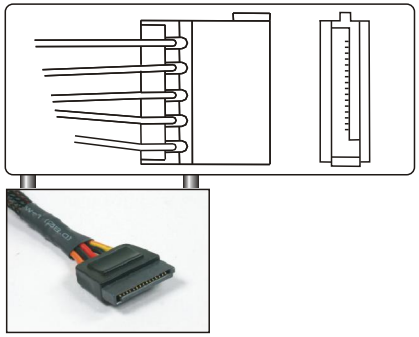
4.1.6 SATA Connector (5 pin)

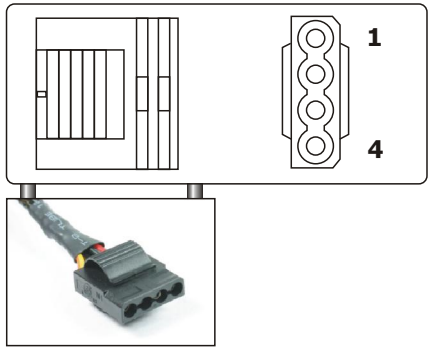
Support the new generation high-speed SATA devices



Color	Signal	Pin
Yellow	+12VDC	1
Black	COM	2
Red	+5VDC	3
Black	COM	4
Orange	+3.3 VDC	5

4.1.7 Peripheral Connector (4 pin)

Support IDE/SCSI (HDD/CD/DVD..etc) devices



Color	Signal	Pin
Yellow	+12VDC	1
Black	COM	2
Black	COM	3
Red	+5VDC	4

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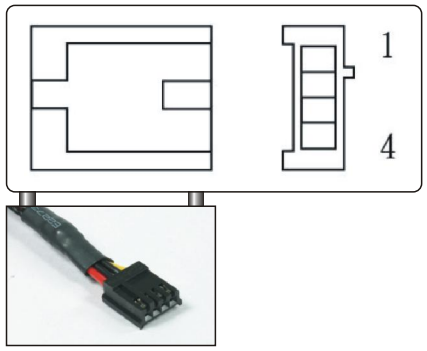
4.1.8 Floppy Disk Connector (4 pin)

Support Floppy Disk and some other additional devices



Color	Signal	Pin
Red	+5VDC	1
Black	COM	2
Black	COM	3
Yellow	+12VDC	4

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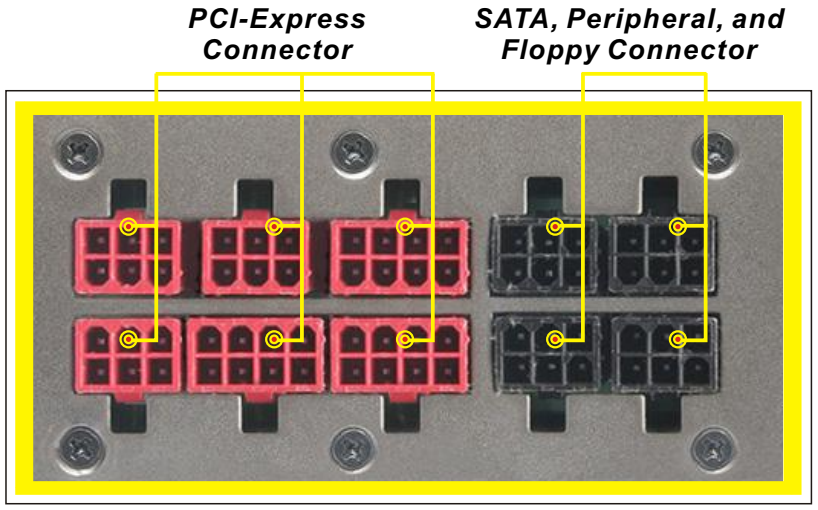
4.2 Modularized Cable Management:

Users can optimize the cables arrangement within the chassis by using only what users need. This feather increases the airflow and reduces the overall ambient temperature within the chassis, also improves the overall look and tidiness of the system.

Embedded Socket and Modularized Cable Management Design:



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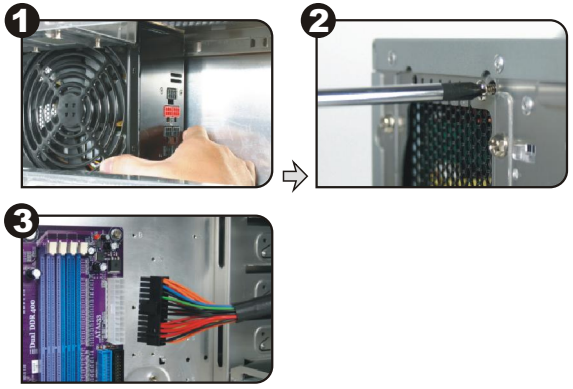
5. Installation Steps

To prevent electrical shocks, please disconnect the power cord from your existing power supply unit. Toughpower 1000W Power Supply has automatic voltage selector which will automatically change to 100V-240V PSU.

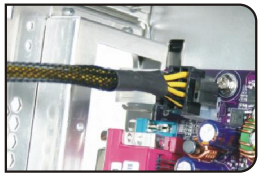
Step 1

After install the power supply unit into the chassis and then connect the 20+4-pin main power cable to motherboard 20pin or 24 pin socket.



Step 2

Connect the 4+4-pin/8-pin +12V auxiliary power connector to the motherboard. (Users can use either 4 pins or 8 pins, depending on the motherboard. Please check with the motherboard user's manual.)



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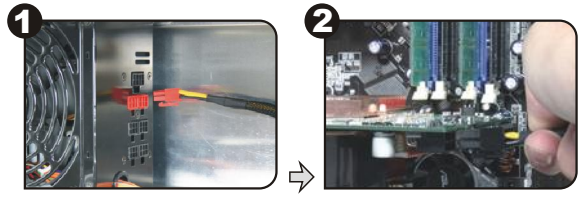
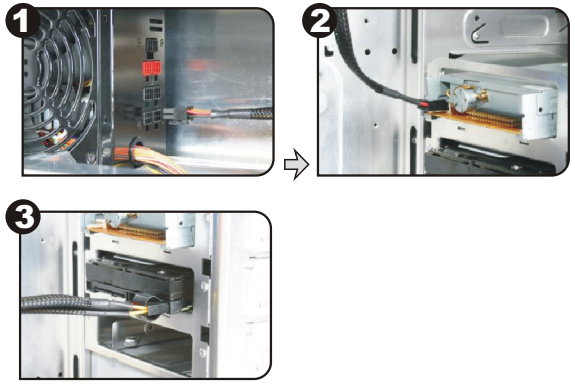
Step 3

Connect the 6 pin/8 ping PCI-Express connector to your graphic card if needed. (**Notice: Before the connection, please refer to Section 6.2 for more information.**)

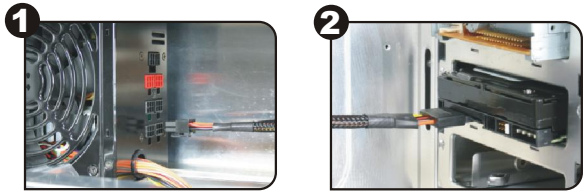


Step 4

Connect the 4 pin power connector to peripheral devices such as DVD-Burner, hard drive, and etc. In addition, a user can connect the 3-pin floppy power connector to connect the floppy drive.



If there are S-ATA hard disk drives present, there are also Serial ATA connectors available.



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6. +12V Rail Distribution & PCI-E Connectors

6.1. +12V Rail Distribution

	W0132 1000W
24 pin +12V	12V1
4+4 pin +12V	12V2
8 pin +12V	12V2, 12V3
Peripheral & Floppy	12V1
S-ATA	12V1
6 pin Modular PCI-E	12V3
6 pin Modular PCI-E	12V3
6 pin Modular PCI-E	12V4
8 pin Modular PCI-E	12V3
8 pin Modular PCI-E	12V4
8 pin Modular PCI-E	12V4

6.2. PCI-E Connectors and +12V Rails Distribution

Please carefully read the table and suggestions below when connecting the 6 pin/8 pin connectors to your graphic card(s), especially when there are more than one PCI-E sockets available on your card(s).

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	6 pin	6 pin	6 pin	8 pin	8 pin	8 pin
12V3	X	X		X		
12V4			X		X	X

Please be noticed that when trying to connect more than one connector to a graphic card, it is strongly recommended to **choose the connectors from exactly the same +12V rail**.

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7. SPEC Table

Model	W0132			
SPECIFICATION				
Power	1000W			
Dimension	200mm(L)x160mm(W)x86mm(H)			
Switches	ATX Logic on-off additional power rocker switch			
PFC	Active PFC (PF > 0.9)			
Cooling System	140mm Fan, 2300RPM±10%			
Noise	16 dBA at 1300 RPM			
P. G. Signal	100-500 ms			
Efficiency	up to 87%			
Hold-up Time	16ms			
INPUT				
Input Voltage	115 VAC ~ 230 VAC			
Input Frequency Range	47 ~ 63 Hz			
MTBF	120,000 hrs minimum (at 25℃)			
Input Current	13A			
OUTPUT				
	Max/Min	Regulation*1	Ripple & Noise*2	Output
+12V1	20A/1A	+3,-3%	120mV	500W
+12V3	36A/1A	+3,-3%	120mV	
+12V2	20A/1A	+3,-3%	120mV	500W
+12V4	36A/1A	+3,-3%	120mV	
+5V	30A/0.5A	+3,-3%	50mV	250W
+3.3V	30A/0.5A	+3,-3%	50mV	
-12V	0.8A/0A	+10,-10%	120mV	9.6W
+5Vsb	3.5A/0A	+3,-5%	50mV	17.5W
Total Power	1000W			
Peak Power	1100W			
*1. +5Vsb operate at 3.5A max load base on PS-ON mode. If PS-OFF +5Vsb only operate at 3A max load. *2. Add 0.1uF and 10uF capacitors across output terminal during ripple & noise test.				
ENVIRONMENT				
Operating Temp.	10 ℃ to 50 ℃			
Storage Temp.	-20 ℃ to 70℃			
Operating Humidity	20% to 90%, non-condensing			
Storage Humidity	5% to 95%, non-condensing			
PROTECTION				
	DC rail	Trigger Point/Range		
Over Voltage Protection	+3.3V trip point	4.5 Vmax		
	+5.0V trip point	7.0 Vmax		
	+12.0V trip point	15.6 Vmax		
Over Current Protection	+3.3V	33A ~ 50A		
	+5.0V	33A ~ 50A		
	+12V1 & +12V2	22A ~ 35A		
	+12V3 & +12V4	39A ~ 55A		
Under Voltage Protection	+3.3V trip point	2.0 Vmin		
	+5.0V trip point	3.3 Vmin		
	+12.0V trip point	8.5 Vmin		
Short Protection	All output to GND			

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8. Other Specification

8.1 Inrush Current:

55A max. when AC input 115Vac at 25℃ cold start.
110A max. when AC input 230Vac at 25℃ cold start.

8.2 Power Efficiency

80%(min.) at full load(typical) and 115Vac input.

8.3 CE Requirements

8.3.1 Conducted EMI

1. Meet FCC: ClassB
2. Meet CISPR 22: ClassB
3. Meet BSMI: ClassB

8.3.2 Safety Standards

1.Meet CUL (UL60950)
2.Meet TUV En60950
3.Meet CB (IEC950)
4.Meet CE

8.3.3 Harmonic

Meet IEC1000-3-2, Class D

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9. Trouble Shooting

Condition 1:

No DC output. The fan or fans are motionless. Check:

1-1 Is the AC inlet plug firmly plugged into the PSU inlet socket?
1-2 Is the wall socket, extension power cord, power strip or surge protector in use, fully functional and wall power switch turned 'ON'?
1-3 Is the Main Board socket (20+4 pin) plug fully and firmly inserted?

Condition 2:

The fan or fans began rotating and then stopped. The system hangs without proceeding any further. Check:

2-1 Are the peripheral connectors firmly plugged into accessory devices, such as the main hard drive, CD ROM, etc?
2-2 If a plug has been inadvertently connected in an off-set or reversed position, unplug the AC power source, reconnect the offending connectors and then wait for 30 seconds before replug in the AC power source and try again.

Note: If the power supply is still unable to power up after following the above instruction, please send the unit back to your dealer or retailer for after sales service.

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